

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Betageri, Guru)
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Appl. No.	:	09/931,399)
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Filed	:	08/16/2001)
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For	:	ENTERIC-COATED)
		PROLIPOSOMAL)
		FORMULATIONS FOR)
		POORLY WATER SOLUBLE)
		DRUGS)
)
Examiner	:	Kishore, G.)

DECLARATION UNDER 37 C.F.R. § 1.132

I, Guru Betageri, Ph.D., do hereby declare as follows:

1. I am Professor and Chairman of the Department of Pharmaceutical Sciences, College of Pharmacy, Western University of Health Sciences in Pomona, CA 91766. I have personal knowledge of the matters set forth herein, and if called upon to testify, I could and would testify competently thereto.
2. I am the sole inventor in the above-captioned case.
3. I prepared pharmaceutical formulations using the method described in the above-captioned application at Example 2 ("Applicant's method"). To generate a comparison of the products produced by Applicant's method and by the Ganter method, I used the method disclosed in U.S. Pat. No. U.S. Pat. No. 5,635,206 to Ganter ("Ganter's method") at Example 1, except that the percentage of water used was 5% and 0%. The specific materials used in the protocols are provided below.
4. I tested two exemplar drugs which are poorly water soluble: Glyburide and Benzocaine. The results from these two drugs are characteristic of poorly water soluble drugs.
5. I quantitatively and qualitatively analyzed the products produced by both methods.
6. The following tables represent true and correct summaries of my protocols and results:

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Protocol Materials Used In Comparison Studies of Glyburide

<i>Material</i>	<i>Quantity Used In Ganter's Method Using 5% Water</i>	<i>Quantity Used In Ganter's Method Using 0% Water</i>	<i>Quantity Used In Applicant's Method</i>
Glyburide	12%	12%	12%
Lecithin (DMPC)	63%	63%	63%
Water	5%	0%	0%
Ethanol	20%	25%	25%

Protocol Materials Used In Comparison Studies of Benzocaine

<i>Material</i>	<i>Quantity Used In Ganter's Method Using 5% Water</i>	<i>Quantity Used In Ganter's Method Using 0% Water</i>	<i>Quantity Used In Applicant's Method</i>
Benzocaine	12%	12%	12%
Lecithin (DMPC)	63%	63%	63%
Water	5%	0%	0%
Ethanol	20%	25%	25%

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Results For Comparison Studies of Glyburide

<i>Glyburide</i>	<i>Ganter's Method With 5% Water</i>	<i>Ganter's Method With 0% Water</i>	<i>Applicant's Method</i>
<i>Texture</i>	Milky	Milky	Powder
<i>Yield (%)</i>	69.40%	55.30%	97.80%
<i>Absorbance</i>	3.8177	3.9141	1.9446
<i>Particle Size</i>	2.544 μm	5.978 μm	8.638 μm

Results For Comparison Studies of Benzocaine

<i>Benzocaine</i>	<i>Ganter's Method With 5% Water</i>	<i>Ganter's Method With 0% Water</i>	<i>Applicant's Method</i>
<i>Texture</i>	Clear Solution	Clear Solution	Powder
<i>Yield (%)</i>	68.09%	68.20%	97.80%
<i>Absorbance</i>	3.6030	3.6130	3.7377
<i>Particle Size</i>	1.190 μm	3.830 μm	9.163 μm

7. The results for Glyburide showed that Applicant's method had at least four separate unexpected and marked advantages over Ganter's method at 5% water and at 0% water. Applicant's method produced:

- Significantly higher yield;
- More effective and efficient incorporation with the lipid, which was shown by a lower absorbance value in the aqueous phase;
- Larger particle size, which is advantageous for ease of coating and increased stability and absorption in the gastrointestinal tract; and
- Powder-like texture, which is easier to manipulate and coat than a milky texture.

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8. For Benzocaine, the results of my experiments showed that Applicant's method was superior to Ganter's method at both 4% water and 0% water in at least three different ways. Applicant's method produced:

- Significantly higher yield;
- Larger particle size, which is advantageous for ease of coating and increased stability and absorption in the gastrointestinal tract; and
- Powder-like texture, which is easier to manipulate and coat than a solution or liquid composition.

9. The results from my comparison studies showed surprising, unexpected and marked results over Ganter's method. Because Applicant's method does not expose the drug to an aqueous phase and evaporates the non-aqueous solvent to produce a product that is capable of being enterically coated, the quality and quantity of the of the formulation is markedly improved.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or patent issuing therefrom.

Executed on December 15, 2003, at Bangalore, India.

By: 

Dr. Guru Betageri

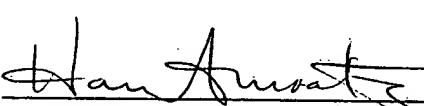
**BEFORE THE OFFICE OF ENROLLMENT AND DISCIPLINE
UNITED STATES PATENT AND TRADEMARK OFFICE**

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Expires: August 26, 2004



Harry I. Moatz
Director of Enrollment and Discipline